

PERSONAL INFORMATION

Damien Chablat



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Sex Male | Date of birth 27/04/1972 | Nationality France

WORK EXPERIENCE

2016–Present

Research Director

Laboratoire des Sciences du Numérique de Nantes [The Laboratory of Digital Sciences], affiliated to the Centre National de la Recherche Scientifique (CNRS)

Research activities in the field of Robotics

2017–Present

Team leader of the ReV –Robotics and Living (“Robotique et Vivant” in French)

Laboratoire des Sciences du Numérique de Nantes [The Laboratory of Digital Sciences], affiliated to the Centre National de la Recherche Scientifique (CNRS)

Research activities in the field of Robotics, especially mimetic mechanisms

2011–Present

Lecturer in Production Design and Industrial Systems Development Dept.

Ecole Centrale de Nantes, France.

Teaching: Virtual reality in product design, CAD modelling, Analysis of Complex Mechanical Systems, Design and Layout of Robotic Sites.

2008–Present

PhD supervisor in Mechanical Engineering

CNRS at IRCCyN and LS2N, France

Research activities in the field of Robotics

1999–Present

Senior researcher

CNRS at IRCCyN and LS2N, France

Research activities in the field of Robotics

1998–1999

Post doctoral fellowship

The Centre for Intelligent Machines within the McGill University, Canada (Prof. Jorge Angeles)

Research activities in the field of Robotics

EDUCATION AND TRAINING

1995

M.S. (Engineering science)

Ecole Centrale de Nantes, France

1998

Ph.D. (Engineering science),

University of Nantes/Ecole Centrale de Nantes, France.

PhD thesis title: “Uniqueness domains and traversability for fully parallel manipulators”

2008 **Habilitation (Engineering science),**

University of Nantes, France.

PhD thesis title: "Contributions to the analysis and optimization of multi-articulated mechanisms".

PERSONAL SKILLS

[Remove any headings left empty.]

Mother tongue(s) French

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills ▪ Team spirit, communicative, solidarity, honesty, fairness, responsibility, dynamism

Organisational / managerial skills ▪ Good organizer and manager, education and research abilities, problem-solving-attitude, ability to respect deadlines for project activities

Job-related skills Competences in kinematic and dynamic modelling of robots, programming of robots and mechanical systems, CAD of robots.

Scientific Coordination and management of research projects

Expertize in writing scientific papers in ISI and BDI journals

Participation at many international conferences in congresses

Coordination of international conferences and workshops

Computer skills C++, Matlab, Fortran, MSC Adams, MathCAD, Solid Edge, NX, AutoCAD, Corel DRAW, MS

▪ Office, Latex, control programming languages etc.

Driving licence ▪ B

ADDITIONAL INFORMATION

Scientific Publications Over 300 publications with more than 70 in high ranking journals (Q and Q2)

Conferences and indexed journals

H Index: 21 (Web of Science), 20 (Scopus), 24 (Google Scholar)

Scientific profiles:

SCOPUS ID: 6602989627 ([link](#));

ORCID: 0000-0001-7847-6162 ([link](#));

WOS Researcher ID: E-7252-2016 ([link](#));

Google Scholar: [link](#)

Full List of publications: <https://cv.hal.science/damien-chablat>

Projects Member or coordinator of over 20 research projects

- Memberships**
- Moderator for Arxiv for Robotics (link);
 - Associate editor of high rank journals (IFTOMM Mechanism and Machine Theory, ASME Journal of Mechanisms and Robotics);
 - Reviewer boards of High ranked journals (Robotica, IEEE Transaction on Robotics, IEEE Robotics and Automation Letters);
 - Editorial committees of international conferences (ASME, IFTOMM, IEEE: ICRA, IDETC, INDIN, IROS), or national (CFM);
 - Organization committee of conferences such as ARK-2008, CIRP-2010, Eucomes-2016 and Romansy-2018;
 - Deputy head of The Research Group (GdR) in Robotics, BIOMIMnhb.
- In addition, collaborations with many countries, especially within research projects and joint scientific papers:
- Italy (Cassino University, Genova University),
 - China (Univ Tsinghua, Changzhou Univ.),
 - India (Centrale Mahindra, CISR),
 - UK (Heriot-Watt Univ., University of the West of Scotland),
 - Canada (Polytechnique Montréal, ETS, Laval University),
 - Austria (Innsbruck University), Australia (Monash University)
- Honours and awards**
- Best paper award** for Chablat, D., Ottaviano, E., Venkateswaran, S. Self-Motion of the 3-PPPS Parallel Robot with Delta-Shaped Base. EuCoMeS 2018, MMS, pp.317-324, 2018.
 - Most cited Article in Mechanism and Machine Theory** ([Link](#)) for the paper “Fundamentals of manipulator stiffness modeling using matrix structural analysis”, published in 2019
- Seminars**
- Tsinghua University (China), August 31 – September 6, 2019,
 - Changzhou University (China), September 26 – October 2, 2017,
 - Vignam’s University (India), December 8 – 15, 2016,
 - BiomimExpo week (7-11 December 2020) in France – invited speaker.
- Presentations (Details)**
- Excerpt (5 relevant publications in the last years)
1. Michel, G.; Bordure, P.; **Chablat, D.** A New Robotic Endoscope Holder for Ear and Sinus Surgery with an Integrated Safety Device. Sensors 2022, 22, 5175. <https://doi.org/10.3390/s22145175>
 2. Guda, V (Guda, Vamsikrishna) ; Mugisha, S (Mugisha, Stanley) ; Chevallereau, C (Chevallereau, Christine) ; Zoppi, M (Zoppi, Matteo) ; Molfino, R (Molfino, Rezia) ; **Chablat, D (Chablat, Damien)**. Necessary and sufficient condition for a generic 3R serial manipulator to be cuspidal , Mechanism and Machine Theory, Volume 171, May 2022, 104729, <https://doi.org/10.1016/j.mechmachtheory.2022.104729>
 3. Durgesh Haribhau Salunkhe, Guillaume Michela Shivesh Kumar, Marcello Sanguineti, **Damien Chablat**. An efficient combined local and global search strategy for optimization of parallel kinematic mechanisms with joint limits and collision constraints, Mechanism and Machine Theory Volume 173, July 2022, 104796, <https://doi.org/10.1016/j.mechmachtheory.2022.104796>
 4. Zhao, WD (Zhao, Wanda) ; Pashkevich, A (Pashkevich, Anatol) ; Klimchik, A (Klimchik, Alexandr) ; **Chablat, D (Chablat, Damien)**, Elastostatic Modeling of Multi-Link Flexible Manipulator Based on Two-Dimensional Dual-Triangle Tensegrity Mechanism, JOURNAL OF MECHANISMS AND ROBOTICS-TRANSACTIONS OF THE ASME, Volume14, Issue 2, Article Number 021002, 2022, DOI10.1115/1.4051789
 5. Mugisha, S.; Guda, V.K.; Chevallereau, C.; Zoppi, M.; Molfino, R.; **Chablat, D.** Improving Haptic Response for Contextual Human Robot Interaction. Sensors 2022, 22, 2040. <https://doi.org/10.3390/s22052040>

National and International
research grants (Detailed)

Total: 20

Excerpt (5 representative grants)

- **Nouvelles interfaces à contact intermittent – Lobby-bot**, partners: Renault, Inria Rennes, LS2N, duration 48 months, starting date: 01/2018, LS2N budget 159300 EURO, ([project link](#)).
- **Développement de systèmes cobotiques pour la préhension et le positionnement de pièces pour la filière automobile – FAST**, partners: CETIM, Europe technologies, LS2N, duration 36 months, starting date: 13/2013, LS2N budget: 198769 EURO, ([project link](#)).
- **Usine du Futur – FACTORY**, duration 51 months, starting date: 09/2015, LS2N budget: 300000 EURO, ([project link](#)).
- **Développement de solutions numériques et mécaniques pour permettre l'interfaçage entre la scène réelle et virtuelle pour faciliter le travail collaboratif en réalité virtuelle – PIVIPP**, partners: Airbus, LS2N, duration 24 months, starting date: 11/2013, LS2N budget 95744 EURO, ([project link](#)).
- **Augmentation des capacités d'un système cobotique pour pouvoir adresser des tâches de manipulation autonome et de co-manipulation de charges supérieures à 15kg et/ou de longueur supérieure à 1m – COBOT ++**, partners: Gpe Vaillant, Airbus, Béné Solutions, LS2N/RoMaS, duration 36 months, starting date: 01/2017, LS2N budget 49000 EURO, ([project link](#)). A detailed presentation of the main outcomes of the project can be found [here](#).
- **Développement d'une solution automatisée d'assemblage de tôles par soudage – ASPEN**, partners: CETIM, DCNS, Europe Technologies, Servisoud, STX, duration 36 months, starting date: 06/2016, LS2N budget 30000 EURO, ([project link](#)).

Nantes,

21.01.2023

Damien Chablat

